

REMARKS

Claims 1-10 are presently pending in this application. By this Amendment, Applicant has amended claims 1-9 to improve clarity, and added new dependent claim 10.

Preliminary Matters

Applicant thanks the Examiner for accepting the drawings filed on September 17, 2003. Applicant further thanks the Examiner for acknowledging the claim to foreign priority under 35 U.S.C. §119, and for confirming receipt of the certified copies of the foreign priority documents.

Information Disclosure Statement

Applicant will supply a legible copy of the JP reference by Jue, *et al.*, as originally submitted with the IDS on September 17, 2003, shortly, and the Examiner will be requested to indicate consideration of this publication in due course.

Objection to the Specification

The Examiner objects to the specification because it lacks section headings. By this Amendment, Applicant has amended the specification to add section headings. Accordingly, Applicant respectfully requests the Examiner to withdraw the objection.

Claim Objections

Claims 1-9 are objected to because of informalities. By this Amendment, Applicant respectfully submits that claims 1-9 are in compliance with United States patent practice, and requests the Examiner to withdraw the objection to claims 1-9.

Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 1-9 are rejected for allegedly being indefinite under 35 U.S.C. §112, second paragraph. By this Amendment, Applicant has amended the claims to improve clarity. Accordingly, Applicant respectfully requests the Examiner to withdraw the §112, second paragraph rejection of claims 1-9.

Claim Rejections Under 35 U.S.C. §102(e)

Claims 1-4 and 6-8 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by Yamada, *et al.* (U.S. Patent No. 7,058,303; hereinafter “Yamada”). Applicant respectfully traverses the rejection.

Independent claim 1 is directed to an optical cross-connect unit of multigranular architecture. Claim 1 (as amended) requires, *inter alia*, a first stage comprising:

first demultiplexer means for demultiplexing wavelength bands and having p groups of n outputs associated with n distinct wavelength bands, each output being connected to a distinct one of the input switch ports of the first matrix, and

first multiplexer means for multiplexing wavelength bands and having p groups of n inputs each connected to a distinct one of the output switch port of the first switching optical matrix,

The Examiner alleges that the demultiplexer 5 of Figure 8 of Yamada corresponds to the claimed demultiplexer. Applicant respectfully disagrees. Nowhere does Yamada disclose that the demultiplexer 5 has “ p groups of n outputs associated with n distinct wavelength bands”. Instead, Yamada merely discloses that a plurality of “wavelength groups” output from the optical fiber 9-1 are divided into M' wavelength groups of smaller granularity demultiplexers and input to a group of optical switches. See Yamada, column 10, lines 18-40. Yamada does not disclose that the demultiplexers have n outputs associated with n distinct wavelength bands.

Yamada further discloses that wavelength signals output from third optical switches 11-1 to 11- M are multiplexed into wavelength groups and then input into second optical switches 7-1 to 7- M to be output on optical fibers 8-1 to 8- M , input into an optical switch, and output to a plurality of optical fibers 3 of the transmission paths. See Yamada, column 7, lines 33-42. Nowhere does Yamada teach that the multiplexers have n inputs each connected to a distinct output switch port of a first matrix, where the first matrix is also connected to a demultiplexer as claimed.

Accordingly, Applicant respectfully submits that independent claim 1, as well as dependent claims 2-4 and 6-8, should be allowable because Yamada does not teach or suggest all of the features of the claims.

Rejections under 35 U.S.C. §103(a)

Claims 5 and 9

Claims 5 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada in view of Masettie, *et al.* (U.S. Patent No. 5,438,566; hereinafter “Masettie”). Applicant respectfully traverses the rejection.

Applicant respectfully submits that Masettie does not make up for the deficiencies in Yamada with regard to claim 1; thus, claims 5 and 9 are patentable at least by virtue of their dependency on claim 1. Therefore, Applicant respectfully submits that the claimed invention would not have been obvious under 35 U.S.C. §103(a) because Yamada and Masettie, alone or in combination, do not teach or suggest all of the features of claims 5 and 9.

Furthermore, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to modify Yamada based on the teachings of Masettie, to produce the claimed invention. It is well settled that the Examiner must “show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for a combination in the manner claimed.” In re Rouffet, 47 USPQ2d 1453 (Fed.Cir. 1998). The mere fact that references can be “combined or modified does not render the resultant combination [or modification] obvious unless the prior art also suggests the desirability of the combination [or modification].” In re Mills, 916 F.2d 680 (Fed.Cir. 1990); MPEP §2143.01.

The Examiner asserts that one of ordinary skill in the art would have been motivated to combine the two references “to enable faster switching rate by using concentrator and deconcentrators in a switching system as suggested by Masetti.” Applicant respectfully submits that Masetti does not provide any teaching that would suggest this alleged motivation.

Masetti is related, generally, to a photonic switching network with the facility to broadcast data in the form of packets of any length. In Figure 2 and column 4, Masetti teaches a switching frame SF comprising R identical switching planes (P1-PR), a divider stage DS (which the Examiner alleges is a deconcentrator) at the input of the switching frame SF to divide the traffic between the R planes, and a concentrator stage CS at the output of the switching frame SF to collect from the various planes cells addressed to the same switching network output. Nowhere does Masetti teach that the use of the concentrators or deconcentrators provides a faster switching rate, as alleged by the Examiner. Rather, in Masetti, concentrators and divider stage merely provide routing functions. Further, Applicant respectfully submits that nowhere does Yamada teach or suggest a need for faster switching.

For the foregoing reasons, Applicant respectfully submits that claims 5 and 9 would not have been obvious under 35 U.S.C. §103(a) because one of ordinary skill in the art would not have been motivated to combine Yamada and Masetti. Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection of claims 5 and 9.

Claim 7

Claim 7 is alternatively rejected under 35 U.S.C. §103(a) as being un-patentable over Yamada in view of Iannone, *et al.* (U.S. Patent No. 6,792,207; hereinafter “Iannone”). Applicant respectfully traverses the rejection

Applicant respectfully submits that Iannone does not make up for the deficiencies in Yamada with regard to claim 1; thus, claim 7 is patentable at least by virtue of its dependency on claim 1. Therefore, Applicant respectfully submits that the claimed invention would not have been obvious under 35 U.S.C. §103(a) because Yamada and Iannone, alone or in combination, do not teach or suggest all of the features of claim 7. Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection of claim 7.

Conclusion

In view of the preceding amendments and remarks, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephonic interview, the Examiner is kindly requested to contact the undersigned attorney at the local telephone number listed below.

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. APP'L NO. 10/663,808

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The USPTO is directed and authorized to charge all required fees (with the exception of the Issue/Publication Fees) to our Deposit Account No. 19-4880. Please also credit any over-payments to said Deposit Account.

Respectfully submitted,



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